

CLAIMS

1. An antenna arrangement comprising a substantially planar patch conductor (14) having a first feed connection point (18) for connection to radio
5 circuitry and a second feed connection point (20) for connection to a ground plane, a first, differential slot (22) in the patch conductor between the first and second connection points and a second, dual band slot (24) located in the patch conductor outside the area between the first and second connection points, wherein the length of the first slot is such as to provide an additional
10 resonance.
2. An antenna arrangement as claimed in claim 1, characterised in that the length of the first slot (22) is greater than a quarter wavelength.
- 15 3. An antenna arrangement as claimed in claim 1, characterised in that the length of the first slot (22) is such that the additional resonance combines with an adjacent resonance.
4. An antenna arrangement as claimed in claim 1, 2 or 3,
20 characterised in that the width (A) of the patch conductor between the first and the second slots is selected to obtain a predetermined impedance transformation.
5. An antenna arrangement as claimed in claim 4, characterised in
25 that the width (A) of the patch conductor between the first and the second slots is selected to give an impedance less than a system impedance.
6. A module comprising a printed circuit board (PCB) (12) providing a ground plane, radio circuitry mounted on the PCB, and an antenna
30 arrangement, the antenna arrangement comprising a substantially planar patch conductor (14) having a first feed connection point (18) for connection to the radio circuitry and a second feed connection point (20) for connection to

the ground plane, a first, differential slot (22) in the patch conductor between the first and second connection points and a second, dual band slot (24) located in the patch conductor outside the area between the first and second connection points, wherein the length of the first slot (22) is such as to provide an additional resonance.

7. A module as claimed in claim 6, characterised in that the length of the first slot (22) is greater than a quarter wavelength.

8. A module as claimed in claim 6, characterised in that the length of the first slot (22) is such that the additional resonance combines with an adjacent resonance.

9. A module as claimed in claim 6, 7 or 8, characterised in that the width (A) of the patch conductor between the first and the second slots is selected to obtain a predetermined impedance transformation.

10. A radio communications apparatus comprising a casing (10) containing a printed circuit board (PCB) (12) providing a ground plane, radio circuitry mounted on the PCB, and an antenna arrangement, the antenna arrangement comprising a substantially planar patch conductor (14) having a first feed connection point (18) for connection to the radio circuitry and a second feed connection point (20) for connection to the ground plane, a first, differential slot (22) in the patch conductor between the first and second connection points and a second, dual band slot (24) located in the patch conductor outside the area between the first and second connection points, wherein the length of the first slot (22) is such as to provide an additional resonance.